

# **Analyses of GARVEE Bonding Capacity 2006**

Analyses for the  
California Transportation Commission  
April 2006

State Treasurer Philip Angelides



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# Executive Summary

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These analyses are provided to the California Transportation Commission (Commission) to assist in its compliance with the provisions of SB 928 (Burton) (Chapter 862, Statutes of 1999) requiring the Commission to prepare, in conjunction with the State Treasurer's Office (STO), an annual analysis of California's bonding capacity for issuing Grant Anticipation Revenue Vehicles, or GARVEE bonds and notes, which are capital market borrowings repaid by federal transportation funds deposited in the State Highway Account.

The State's authority for issuance of GARVEE obligations derives both from federal legislation and from the passage of SB 928 in 1999, which established Government Code Sections 14550 through 14555.9. The bill was sponsored by the STO to ensure California had the necessary state legislative authority to make use of this financing tool for accelerating high priority transportation projects. SB 928 became effective January 1, 2000, and was further amended by AB 438 (Chapter 113, Statutes of 2001), AB 3026 (Chapter 438, Statutes of 2002), SB 1098 (Chapter 212, Statutes of 2004), and SB 1507 (Chapter 793, Statutes of 2004).

The issuance of additional GARVEE bonds is subject to Government Code Section 14553.4, which states the Treasurer may not authorize the issuance of the bonds if the annual debt service on all outstanding GARVEE obligations would exceed 15 percent of the total amount of federal transportation funds deposited in the State Highway Account in the State Transportation Fund for any consecutive 12-month period within the preceding 24 months. Thus, current and future bonding capacity analyses must take place in the context of this "cap."

There are other factors which also affect bonding capacity, such as: maturity structures, interest rates, and policy decisions. As a result, these analyses continue the practice of prior analyses by providing "sensitivity analyses" under different scenarios, with varying assumptions for maturity dates and interest rates. This approach should continue to assist the Commission in examining and responding to future applications in the context of alternative scenarios.

In December 2003, the Commission adopted policy guidelines that stipulate the intent not to issue additional GARVEE obligations where the annual debt service on all outstanding obligations would exceed 15 percent of the total amount of federal transportation funds deposited in the State Highway Account in the State Transportation Fund for any consecutive 12-month period within the preceding 24 months. SB 1507 amended the statutory cap to align it with the Commission's 15 percent cap. The analyses in this report are based on the 15 percent cap set forth in both the policy guidelines and statutory requirements.

On March 10, 2004, the State issued \$614,850,000 State of California (California Department of Transportation) Federal Highway Grant Anticipation Bonds Series 2004A, the first and only issuance of GARVEE obligations to date. As of April 1, 2006, there is \$525,460,000 principal amount of Series 2004A Bonds outstanding. The Series 2004A Bonds are structured with a level debt solution with serial maturities from 2005 through 2015. The maximum annual debt service of the Series 2004A Bonds is \$72,901,444 in Fiscal Year (FY) 2013. The issue received underlying ratings of Aa3, AA-, and AA- from Moody's, Standard & Poor's and Fitch Ratings, respectively. The current outstanding Series 2004A Bonds are insured and therefore rated in the AAA category.

The analyses of 2006 show that the bonding capacity is reduced when compared with the analyses of 2005. The analyses show a resulting bonding capacity ranging from a low of \$1.22 billion to a high of \$2.25 billion. The primary factor that contributed to the decrease in the bonding capacity is higher market interest rates. Rates have generally increased over the prior year, rising 59 basis points for the 6-year analyses and 21 basis points for the 12-year analyses, when compared to the rates used for the 2005 Report.

These analyses demonstrate that a wide range of circumstances, including policy and market factors, can affect the existing capacity for future State GARVEE financings. Therefore, the analyses should be used as a tool for understanding the implications of alternative project applications and the related potential GARVEE bond structures that the Commission may be asked to consider over the coming year.

# **I. Purpose of Analyses**

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The following analyses are provided to assist the Commission in meeting the requirements of SB 928 (Burton) (Chapter 862), sponsored by the STO to ensure California had the necessary state legislative authority to make use of this financing tool for accelerating high priority transportation projects. The analyses relate specifically to those requirements found in Section 14553(b) of the Government Code, which states:

*“Notwithstanding Section 7550.5 of the Government Code, on or before April 1 of each year, the commission, in conjunction with the Treasurer’s office, shall prepare an annual analysis of the bonding capacity of federal transportation funds deposited in the State Highway Account in the State Transportation Fund.”*

The analyses have been performed consistent with the GARVEE bonds bonding capacity guidelines provided in Government Code Section 14553.4, which states:

*“The Treasurer may not authorize the issuance of notes if the annual repayment obligations of all outstanding notes in any fiscal year would exceed 15 percent of the total amount of federal transportation funds deposited in the State Highway Account in the State Transportation Fund for any consecutive 12-month period within the preceding 24 months.”*

The following analyses are intended to measure the capacity of the State Highway Account to support future issuance of GARVEE bonds, given:

1. the historical record of federal deposits to the State Highway Account (we examine deposits of pledged funds only);
2. requirements preceding any issuance of additional bonds under the Master Trust Indenture; and
3. the “statutory cap” on total outstanding GARVEE bonds.

# **II. The 2004 GARVEE Financing**

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The Series 2004A Bonds are secured by a Master Trust Indenture dated February 1, 2004, as amended and supplemented by a First Supplemental Indenture dated February 1, 2004, by and among the Treasurer, the Commission and the California Department of Transportation (Department). The Series 2004A Bonds and all future bonds and obligations issued under the Master Trust Indenture are secured solely by the Trust Estate that consists solely of federal transportation funds. The primary source of federal transportation funds is the amount appropriated to the State by the federal government pursuant to Federal Aid Authorization, pursuant to Title 23 U.S. Code authorizing federal funding of state transportation projects.

The Department entered into a Memorandum of Agreement with the Federal Highway Administration (FHWA) in anticipation of reimbursement by FHWA for debt service and other bond related costs associated with the federal-aid projects approved by the FHWA.

The Master Trust Indenture provides for the issuance of additional bonds on parity with the Series 2004A Bonds. Any additional parity bonds or other bonds issued on a basis subordinate to the Series 2004A Bonds would have to comply with the “statutory cap.”

The \$657,713,000 proceeds of the Series 2004A Bonds are being used to pay a portion of the costs of acquisition of right-of-way and/or construction costs for eight federal-aid projects approved by the Commission for funding. The eight projects are:

- San Diego I-15 Managed Lanes
- Riverside SR-60/SR-91/I-215
- Santa Clara I-880/Coleman Avenue
- Santa Clara SR-87 (North)
- Santa Clara SR-87 (South)
- Los Angeles I-5 HOV Lanes
- Los Angeles I-405 Auxiliary Lanes
- Los Angeles I-405/Highway 101 Gap Closure

Although start-up of some of the projects was delayed, all eight projects are now under construction. As of December 31, 2005, approximately 33 percent of the bond proceeds were expended for project delivery. The Commission and the Department continue to monitor each project’s progress to ensure the expedient use of bond proceeds.

### III. Need for Sensitivity Analyses

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There are multiple factors that will influence the State’s future capacity to issue GARVEE bonds. These factors include the final maturity, interest rates and the available revenues for the additional bonds test. As a result, no single bonding capacity analysis is sufficient for purposes of guiding the Commission’s evaluation of the potential for future use of GARVEE bonds. Therefore, to facilitate an informed consideration of future applications with structures and terms not yet known to the Commission, we have performed a series of “sensitivity analyses” under alternative scenarios. The factors that have been varied in these different analyses are identified in the following table.

<b>Primary Factors Affecting Bonding Capacity Sensitivity Analyses</b>
Final Maturity
Assumed Interest Rates

## IV. Information Sources

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### **Pledged Revenues:**

In performing these bonding capacity analyses, the STO is using data obtained from the Department regarding deposits into the State Highway Account in the State Transportation Fund from federal transportation funds. The amounts provided by the Department represent federal funds that can be legally pledged under the Master Trust Indenture for payment of the Bonds. The federal transportation funds legally available for payment of debt service include those derived from federal aid authorization under Title 23, including apportioned funds (i.e., National Highway System, Interstate Maintenance, Highway Bridge Rehabilitation and Replacement, Surface Transportation Programs, Congestion Mitigation and Air Quality and amounts available under minimum guarantees) with corresponding Obligation Authority (OA). Excluded from these total funds and OA legally available for payment of debt service are those categories of funds related to specific congressional action (i.e., High Priority Projects – better known as “Earmarks”) and other specified programmatic “set-asides” as determined in law by formula (i.e., State Planning and Research, Metropolitan Planning, Revenue Aligned Budget Authority, Discretionary, and Section 163).

This information was provided on a monthly basis for the period of January 2004 through December 2005. See **Attachment A** for the complete listing of these monthly deposits and related calculations. The additional bonds test is based on the highest consecutive 12-months of pledged revenue deposits in the prior 24-month period. These historic annual deposits are a known quantity at any given point in time, but clearly are subject to change over time, and must be re-examined at the time of each potential GARVEE bond issuance.

### **Final Maturities:**

The analyses in the report assume additional GARVEE bonds issued in 2006 with final maturities in 2012 and 2018.

### **Interest Rate Assumptions:**

Estimates of potential interest costs under various scenarios were developed by the STO based on the AA index published by Municipal Market Data (MMD), a widely used industry benchmark. The interest rate assumptions used for the analyses are based on the weighted average coupon, using a level debt solution for each final maturity (or amortization period).

## V. Summary of Alternative Assumptions

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For the 2006 bonding capacity analyses, we used the MMD “AA” interest rate scale, which corresponds with the actual underlying ratings received for the first issue of GARVEE bonds. The two alternative scenarios for market conditions used in these analyses are as follows:

- 1. Base Case:** Based on the March 1, 2006 MMD AA interest rate scale.
- 2. Market Sensitivity Case:** Base Case plus 100 basis points.

Many observers believe long-term interest rates will increase from the current levels. For this reason, and based on the expected short-term maturity structure of the State's current and future GARVEE obligations, a 100 basis point increase in interest rates is used for the market sensitivity analyses.

Two alternatives for the final maturity of the bonds were analyzed for each case. The table below summarizes the range of assumptions for the sensitivity analyses. The different scenarios for each factor combine for a total of four different analyses.

<b>Factors</b>	<b>Range of Assumptions</b>
Final Maturity	Two scenarios: varying at 6 and 12 years from date of issuance
Assumed Interest Rates	Two scenarios: one at AA MMD market rates on March 1, 2006 and one at 100 basis points above the March 1, 2006 AA MMD market rates

See **Attachment B** for the detailed assumptions used in each sensitivity analysis.

It also should be noted that the current analyses, by necessity, requires significant simplification as compared to the myriad of structuring nuances that would be involved in actual bond sales. As a result, certain ambiguities or alternative interpretations could lead to somewhat differing results in practice. One example of a simplification, common to all scenarios, is the assumption that all GARVEE bonds within the capacity of a given scenario would be issued in a single, initial year and not staggered over multiple years, as typically would be expected in a bonding program of significant magnitude.

If, instead, such bonds were staggered and this financing structure was assumed to have a fixed "end date" represented by the assumed final maturity used in each scenario, each resulting measure of maximum bonding capacity would have to be adjusted downward. This would be necessary because the GARVEE bonds issued in subsequent years would have a shorter period during which to amortize principal before the fixed end date. This would increase the annual debt service necessary for a given par amount of bonds, causing a reduction in total bonding capacity, assuming a fixed amount of annual revenues for each scenario.

Alternatively, this simplification would not have this constraint on capacity if future financings were assumed to be structured on a "rolling maturity" basis, that is, with each GARVEE bond issued in subsequent years within each scenario having exactly the same underlying terms, such as total years to maturity and interest rate, regardless of the timing of any future bond issuance. This latter simplification would also assume a fixed amount of annual revenues for each scenario.

This discussion is offered as an example, which is by no means exhaustive, of the implications of the necessary simplifications involved in any analysis of bonding capacity given current uncertainty about the "real life" conditions that will exist at the time of any future issuance of GARVEE bonds or obligations. Therefore, care should be exercised in using these analyses to avoid erroneous interpretations or conclusions.



## VI. Summary of Results

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Due to higher market interest rates over the prior year, the current analyses resulted in a lower bonding capacity than last year's results. For example, a 6-year maturity bond issuance corresponds to a bonding capacity ranging from \$1.22 billion (market sensitivity case) to \$1.26 billion (base case). These levels represent a decrease of \$180 million and \$190 million, respectively, over those in 2005, or a decrease of approximately 13 percent over last year.

The Commission policy established 12 years as the maximum maturity for GARVEE bonds. If all future bond issues are structured with a 12-year amortization period consistent with the current Commission policy and at current interest rate levels, the remaining capacity for issuance of GARVEE bonds would be from \$2.12 billion (market sensitivity case) to \$2.25 billion (base case). These levels represent a decrease of \$310 million and \$330 million, respectively, over those in 2005, or a decrease of almost 13 percent over last year.

A longer amortization period would increase the additional bonding capacity. If the Commission policy changes to allow a longer maximum maturity, the bonding capacity would increase accordingly.

The average monthly deposits into the State Highway Account, from 2002 on, is based on all federal transportation funds that are deposited into the State Highway Account and are legally available to be pledged in the Master Trust Indenture to pay the GARVEE bonds, as discussed previously under "Pledged Revenues" in Section IV of this report.

The interest rates used for the 2006 analyses assume an AA rating on the GARVEE bonds. As of March 1, 2006, the weighted average interest rate for AA rated bonds with a 6-year final maturity is 3.66 percent and with a 12-year final maturity is 3.82 percent.

The following table summarizes key results of our analyses. Detailed worksheets supporting the results can be found in **Attachments C and D** for ease of reference.

Summary of Results for GARVEE Bonding Capacity Sensitivity Analyses		
Final Maturity Amortization Period	Base Case March 1, 2006 AA MMD Scale	Market Sensitivity Case Base Case plus 100 Basis Points
6 years	\$1.26 billion	\$1.22 billion
12 years	\$2.25 billion	\$2.12 billion

## VII. California Transportation Commission Policy

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The Commission adopted a GARVEE policy in December 2003. This policy extends through the next federal transportation reauthorization act, which is expected to continue through the 2008-09 federal fiscal year.

The policy, contained in Commission Resolution No. G-03-21, is as follows:

- Debt Limit. The Commission will limit annual GARVEE debt service to 15 percent of qualifying federal revenues. This limit will be calculated on the basis described in Section 14553.4 of the Government Code (i.e., 15 percent of the total amount of federal transportation funds deposited in the State Highway Account for any consecutive 12-month period within the preceding 24 months).
- Term. Each bond will be structured for debt service payments over a term of no more than 12 years.
- Project Selection. The Commission will select projects for accelerated construction through the use of GARVEE bonding. The selection will be made through the programming process for the State Transportation Improvement Program (STIP) and the State Highway Operation and Protection Program (SHOPP). The Commission will select projects that are major improvements to corridors and gateways for interregional travel and goods movement. Major improvements include projects that increase capacity, reduce travel times, or provide long-life rehabilitation of key bridges or roadways.

## VIII. Recent Events

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State transportation funding has been significantly impaired over the last three fiscal years due to general fund loans, transfers, and other funding impacts primarily intended to improve the State's general fund condition. Because of the lack of transportation funds during this period, any future GARVEE financing was suspended until federally-required state matching funds could be identified. It is anticipated that the earliest GARVEE issuance would be during Fiscal Year 2006-2007, although it is possible that issuance could be delayed even further.

The Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), which authorizes the use of federal transportation funds, has been reauthorized for another five-year period, from 2005 to 2009, after the latest short term extension of TEA-21 expired on May 31, 2005.

## **IX. Conclusion**

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As the above analyses show, the ultimate capacity existing for the State's future GARVEE financings will depend on a wide range of circumstances over time, including market conditions, maturity structures, and other factors that may be considered by the Commission in the future.

We hope these analyses will prove useful in light of some of the structuring options available for GARVEE financing, in addition to meeting the immediate goal of assisting the Commission in preparing its annual report.

# ATTACHMENT A-1

## FEDERAL DEPOSITS INTO THE STATE HIGHWAY ACCOUNT

### Cumulative 12-Month Federal Deposits into the State Highway Account Over 24-Month Period, ending December 31, 2005

Period Covered		12-Month Total Revenues Deposited	
Jan-04	Dec-04	\$1,953,499,715.83	
Feb-04	Jan-05	\$2,004,231,581.14	
Mar-04	Feb-05	\$1,949,198,059.68	
Apr-04	Mar-05	\$1,861,665,843.94	
May-04	Apr-05	\$1,723,210,660.22	Lowest 12-Month Total
Jun-04	May-05	\$1,986,581,588.44	
Jul-04	Jun-05	\$2,065,908,555.32	Highest 12-Month Total
Aug-04	Jul-05	\$2,043,140,665.11	
Sep-04	Aug-05	\$1,878,208,934.19	
Oct-04	Sep-05	\$1,851,973,196.05	
Nov-04	Oct-05	\$1,940,029,024.62	
Dec-04	Nov-05	\$2,019,258,854.78	
Jan-05	Dec-05	\$1,954,212,936.20	
		\$1,940,855,355.04	Average 12-Month Total

Source: California Department of Transportation

## ATTACHMENT A - 2

### FEDERAL DEPOSITS INTO THE STATE HIGHWAY ACCOUNT

	Monthly Deposits of all Federal Funds into State Highway Account		Monthly Deposits of Legally Pledged Federal Transportation Fund			
	2001	2002	Revised 2002	2003	2004	2005
Month	Deposit Amount	Deposit Amount	Deposit Amount	Deposit Amount	Deposit Amount	Deposit Amount
January	\$292,768,595.59	\$374,758,124.97	\$282,681,171.87	\$129,633,322.45	\$156,113,957.27	\$206,845,822.58
February	\$101,908,226.48	\$209,544,305.44	\$158,059,894.83	\$176,469,364.31	\$107,884,399.62	\$52,850,878.15
March	\$116,551,593.66	\$260,419,048.96	\$196,434,865.67	\$176,660,031.09	\$208,994,154.98	\$121,461,939.24
April	\$119,796,825.42	\$196,474,114.54	\$148,201,010.84	\$420,948,316.42	\$250,169,876.73	\$111,714,693.00
May	\$156,000,075.99	\$115,355,567.53	\$87,013,048.79	\$159,159,415.85	\$91,206,926.97	\$354,577,855.19
June	\$253,660,527.36	\$102,356,476.33	\$77,207,795.51	\$273,461,672.27	\$134,625,900.41	\$213,952,867.29
July	\$147,895,873.85	\$214,132,144.40	\$161,520,515.45	\$165,281,995.19	\$160,390,987.82	\$137,623,097.61
August	\$204,700,825.57	\$216,364,894.49	\$163,204,685.51	\$209,994,087.21	\$300,347,308.72	\$135,415,577.80
September	\$174,876,482.17	\$215,774,125.14	\$162,759,066.42	\$133,524,108.16	\$216,635,946.78	\$190,400,208.64
October	\$182,116,657.75	\$226,730,163.97	\$171,023,239.20	\$89,565,350.88	\$75,856,747.18	\$163,912,575.75
November	\$234,233,366.71	\$182,207,900.39	\$137,439,962.94	\$121,999,022.22	\$76,392,836.23	\$155,622,666.39
December	\$263,201,366.08	\$231,122,159.12	\$174,336,134.25	\$192,813,801.50	\$174,880,673.12	\$109,834,754.54
<b>TOTAL</b>	<b>\$2,247,710,416.63</b>	<b>\$2,545,239,025.28</b>	<b>\$1,919,881,391.28</b>	<b>\$2,249,510,487.55</b>	<b>\$1,953,499,715.83</b>	<b>\$1,954,212,936.20</b>
<b>Monthly Average</b>	<b>\$187,309,201.39</b>	<b>\$212,103,252.11</b>	<b>\$159,990,115.94</b>	<b>\$187,459,207.30</b>	<b>\$162,791,642.99</b>	<b>\$162,851,078.02</b>

Source: California Department of Transportation. The Revised 2002 Deposit Amount column reflects deposits into the State Highway Account of Federal Transportation Funds that could be legally pledged under the Master Trust Indenture, which is less than all Federal Funds deposited in the State Highway Account in 2002.

**ATTACHMENT B****DETAILED ASSUMPTIONS  
FOR SENSITIVITY ANALYSES**

Summary of Assumptions for GARVEE Bonding Capacity Sensitivity Analyses			
Base Case – Current Market Conditions			
	Factors	Assumptions	Comments
	Final Maturity	6 and 12 years	Analyses run at each final maturity listed at left.
	Interest Rates	3.66% and 3.82%	Rates indicated relate to each respective final maturity above; listed rates represent the weighted average coupon for a bond issue sizing with level annual debt service.
	Annual Revenues	\$2,065,908,555	The Treasurer may not authorize the issuance of the bonds if the annual debt service on all outstanding GARVEE obligations would exceed 15 percent of the State's historical annual deposits in the State Highway Account from federal funding.

Market Sensitivity Case – Alternative Market Conditions			
	Factors	Assumptions	Comments
	Final Maturity	6 and 12 years	Analyses run at each final maturity listed at left.
	Interest Rates	4.66% and 4.82%	Rates indicated relate to each respective final maturity above; listed rates represent the weighted average coupon for a bond issue sizing with level annual debt service.
	Annual Revenues	\$2,065,908,555	The Treasurer may not authorize the issuance of the bonds if the annual debt service on all outstanding GARVEE obligations would exceed 15 percent of the State's historical annual deposits in the State Highway Account from federal funding.

## ATTACHMENT C

### DETAILED WORKSHEET FOR SENSITIVITY ANALYSES

OVERVIEW OF GARVEE BONDING CAPACITY ANALYSES	
<p>The bond test requires that the annual payment obligations of all outstanding notes in any fiscal year not to exceed 15 percent of the the Federal Transportation Funds deposited in the State Highway Account for the highest 12 consecutive months in the last 24 months. The Series 2004A Bonds maximum Annual Debt Service has been subtracted from the last 12 highest consecutive months in order to calculate the remaining Additional Debt Capacity.</p>	
<p style="text-align: center;"><b>Base Case</b></p> <p>Maximum Par Amount of Bonding Capacity</p> <p>Interest rate</p> <p>Maximum Assumed Annual Debt Service *</p> <p>Term of Bond Issue</p>	<p style="text-align: right;">\$1,256,179.12</p> <p style="text-align: right;">3.66%</p> <p style="text-align: right;">(236,985.35)</p> <p style="text-align: right;"><b>6</b></p>
<p style="text-align: center;"><b>Market Sensitivity</b></p> <p>Maximum Par Amount of Bonding Capacity</p> <p>Interest rate</p> <p>Maximum Assumed Annual Debt Service *</p> <p>Term of Bond Issue</p>	<p style="text-align: right;">\$1,216,055.06</p> <p style="text-align: right;">4.66%</p> <p style="text-align: right;">(236,985.35)</p> <p style="text-align: right;"><b>6</b></p>
<p style="text-align: center;"><b>Base Case</b></p> <p>Maximum Par Amount of Bonding Capacity</p> <p>Interest rate</p> <p>Maximum Assumed Annual Debt Service *</p> <p>Term of Bond Issue</p>	<p style="text-align: right;">\$2,247,535.71</p> <p style="text-align: right;">3.82%</p> <p style="text-align: right;">(236,985.35)</p> <p style="text-align: right;"><b>12</b></p>
<p style="text-align: center;"><b>Market Sensitivity</b></p> <p>Maximum Par Amount of Bonding Capacity</p> <p>Interest rate</p> <p>Maximum Assumed Annual Debt Service *</p> <p>Term of Bond Issue</p>	<p style="text-align: right;">\$2,121,948.00</p> <p style="text-align: right;">4.82%</p> <p style="text-align: right;">(236,985.35)</p> <p style="text-align: right;"><b>12</b></p>
<p>*15% of legally pledged Federal Transportation Funds deposited in the State Highway Account less maximum annual debt service for the Series 2004A Bonds.</p>	
(white / non-shaded)	= Base Case Scenarios based on March 01, 2006 AA MMD Scale
(yellow / shaded)	= Market Sensitivity Case Scenarios based on March 01, 2006 AA MMD Scale Plus 100 Basis Points

## ATTACHMENT D-1

### DETAILED SUMMARY TABLES FOR SENSITIVITY ANALYSES

#### GARVEE BONDING CAPACITY

##### Base Case

Highest 12-Month Revenue (\$ in 000's)	\$2,065,909
Indenture Debt Service Test (15% of Revenue)	\$309,886
Less: Existing Maximum Annual Series 2004A Debt Service	-\$72,901
Remaining Maximum Annual Debt Service Capacity	\$236,985

(Dollars in Thousands)

	6 Years	12 Years
Assumed Date of Issuance	2006	2006
Assumed Final Maturity	2012	2018
Assumed Interest Rate <sup>(1)</sup>	3.66%	3.82%
Par Capacity	\$1,256,179	\$2,247,536
Annual Debt Service Required	\$236,985	\$236,985

(1) The assumed interest rates are based on the March 01, 2006 AA MMD bond scale. The rates used are the weighted average coupon for a level debt service bond sizing based upon the final maturity in each scenario.



**ATTACHMENT D-2****DETAILED SUMMARY TABLES  
FOR SENSITIVITY ANALYSES****GARVEE BONDING CAPACITY****Market Sensitivity Case**

Highest 12-Month Revenue (\$ in 000's)	<b>\$2,065,909</b>
Debt Service Test (15% of Revenue)	<b>\$309,886</b>
Less: Existing Maximum Annual Series 2004A Debt Service	<b>-\$72,901</b>
Remaining Maximum Annual Debt Service Capacity	<b>\$236,985</b>

**(Dollars in Thousands)**

	<b>6 Years</b>	<b>12 Years</b>
Assumed Year of Issuance	2006	2006
Assumed Final Maturity	2012	2018
Assumed Interest Rate <sup>(1)</sup>	4.66%	4.82%
Par Amount	<b>\$1,216,055</b>	<b>\$2,121,948</b>
Annual Debt Service Required	\$236,985	\$236,985

(1) The assumed interest rates are based on the March 01, 2006 AA MMD bond scale (increased by 100 basis points (1%) for market fluctuations). The rates used are the weighted average coupon for a level debt service bond sizing based upon the final maturity in each scenario.